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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,813	06/26/2003	Young-Woo Lee	1293.1746	2773

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EXAMINER

ORTIZ CRIADO, JORGE L

ART UNIT	PAPER NUMBER
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2627

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/603,813	Applicant(s) LEE ET AL.	
	Examiner Jorge L. Ortiz-Criado	Art Unit 2656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06/23/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06/23/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuroda et al. U.S. Patent No. 6,144,625.

Regarding claim 1, Kuroda et al. discloses an apparatus identifying a type of a disc (see Figs 1-2, 6; see col. 6, lines 25-67; col. 11, lines 9-11), comprising:

an RF (radio frequency) amplifier (7; 7a) amplifying light reflected by the disc;

an LPP signal detector (13) detecting an LPP (Land Pre-Pit) signal from output signals of the RF amplifier; and

a system controller (9) identifying a type of the disc according to whether the LPP signal is detected by the LPP signal detector.

Regarding claim 2, Kuroda et al. discloses wherein the LPP signal detector (13) detects the LPP signal by slicing push-pull signals output from the RF amplifier (7, 7a) at a constant level (see col. 8, lines 6-29).

Regarding claim 3, Kuroda et al. discloses wherein the system controller (9) determines that the disc is a DVD(-)/ "R" type disc when the LPP signal is detected (see Fig. 6, step 25 "YES", step S23),

and that the disc is a DVD(+)/ "other" type disc when the LPP signal is not detected (see Fig. 6, step 25 "NO", step S17).

Regarding claim 4, Kuroda et al. discloses wherein the system controller (9) determines that the disc is a DVD(-)/ "R" type disc when the LPP signal is detected (see Fig. 6, step 25 "YES", step S23),

and that the disc is a DVD(+)/ "other" type disc when the LPP signal is not detected (see Fig. 6, step 25 "NO", step S17).

Regarding claim 5, Kuroda et al. discloses a method of discriminating a type of a disc, comprising: detecting an LPP signal from signals reproduced from the disc; and identifying a type of the disc according to whether the LPP signal is detected (col. 11, lines 9-59; Fig. 6).

Regarding claim 6, Kuroda et al. discloses wherein the detecting the LPP signal includes detecting the LPP signal by slicing push-pull signals at a constant level (see col. 8, lines 6-29).

Regarding claim 7, Kuroda et al. discloses wherein the identifying of the type of the disc includes determining that the disc is a DVD(-)/ "R" type disc when the LPP signal is detected (see Fig. 6, step 25 "YES", step S23),

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and that the disc is a DVD(+)/ “other” type disc when the LPP signal is not detected (see Fig. 6, step 25 “NO”, step S17).

Regarding claim 8, Kuroda et al. discloses wherein the identifying of the type of the disc includes determining that the disc is a DVD(-)/ “R” type disc when the LPP signal is detected (see Fig. 6, step 25 “YES”, step S23),

and that the disc is a DVD(+)/ “other” type disc when the LPP signal is not detected (see Fig. 6, step 25 “NO”, step S17).

Regarding claim 9, Kuroda et al. discloses a method of identifying a type of a disc as either a DVD(-)/ “R” type disc or a DVD(+)/ “other” type disc, comprising:

determining whether an LPP is included in a wobble signal from the disc (see col. 8, lines 6-29); and

identifying the disc as a DVD(-)/ “R” type disc if the LPP is present (see Fig. 6, step 25 “YES”, step S23) or as a DVD(+)/ “other” type disc if the LPP is not present (see Fig. 6, step 25 “NO”, step S17).

Regarding claim 10, Kuroda et al. discloses an apparatus identifying a disc type (see Figs 1-2, 6; see col. 6, lines 25-67; col. 11, lines 9-11), comprising:

an RF amplifier (7, 7a) that produces a push-pull signal from a light wave reproduced from a disc; and

an LPP signal detector (13) that detects a certain voltage level (reference value) in the push-pull signal (see col. 8, lines 6-29);

wherein if the certain voltage level is detected (see col. 8, lines 6-29) the disc is identified as a DVD(-)/ "R" type disc (see Fig. 6, step 25 "YES", step S23) and if the certain voltage level is not detected the disc is identified as a DVD(+)/ "other" type disc (see Fig. 6, step 25 "NO", step S17).

Regarding claim 11, Kuroda et al. discloses wherein the LPP detector (13) detects an LPP in the push-pull signal by detection of the certain voltage level (see col. 8, lines 6-29).

Regarding claim 12, Kuroda et al. discloses a system controller (9) that controls a disc drive and identifies the disc type (Figs 1).

Regarding 13, Kuroda et al. discloses a servo controller that enables tracking and focusing (see col. 7, lines 45-59; col. 9, lines 18-24).

Regarding 14, Kuroda et al. discloses an optical detector (1) that detects the light wave reflected from the disc (see Fig. 1).

Regarding claim 15, Kuroda et al. discloses wherein the optical detector (1) comprises: a structure divided into four sections having a first photodiode, a second photodiode, a third photodiode, and a fourth photodiode (see Fig. 1).

Regarding claim 16, Kuroda et al. discloses wherein the RF amplifier (7, 7a) comprises:

a current-to-voltage converter having a first amplifier, a second amplifier, a third amplifier, and a fourth amplifier, wherein the four amplifiers convert output signals from corresponding first through fourth photodiodes of the optical detector to voltage values (inherent to Kuroda et al.); and

a push-pull operator having a first adder (19), a second adder (20), and a subtracter (21), wherein the first adder adds output signals of the first amplifier and the second amplifier to produce a first added signal, the second adder adds output signals of the third amplifier and the fourth amplifier to produce a second added signal, and the subtracter adds the first added signal and the second added signal to produce the push-pull signal (see Fig 2, # 7a).

Regarding claim 17, Kuroda et al. discloses wherein the LPP detector (13) detects an LPP signal according to detection of the certain voltage level by slicing the push-pull signal at a constant level (see col. 8, lines 6-29).

Regarding claim 18, Kuroda et al. discloses an optical detector (1) having a bi-sectional structure that includes a first photodiode (B1B4) and a second photodiode (B2B3) (see Fig 2).

Regarding claim 19, Kuroda et al. discloses a method of identifying a disc type (col. 11, lines 9-59; Fig. 6), comprising:

analyzing an output signal to determine whether the output signal includes a certain voltage level (see col. 8, lines 6-29), wherein if the output signal includes the certain voltage

level the disc is identified as a DVD(-)/ "R" type disc (see Fig. 6, step 25 "YES", step S23) and if the output signal does not include the certain voltage level the disc is identified as a DVD(+)/ "other" type disc (see Fig. 6, step 25 "NO", step S17).

Regarding claim 20, Kuroda et al. discloses a method of identifying a type of a disc immediately after controlling a tracking servo (col. 11, lines 9-59; Fig. 6), comprising: producing a push-pull signal (Spp) from a signal reproduced from the disc; detecting an LPP signal by slicing the push-pull signal (see col. 8, lines 6-29); wherein the disc is identified as a first DVD type/ "R" disc if the LPP signal is detected (see Fig. 6, step 25 "YES", step S23) and the disc is identified as a second DVD type / "other" disc if the LPP signal is not detected (see Fig. 6, step 25 "NO", step S17).

Regarding claim 21, Kuroda et al. discloses enabling tracking and focusing modes of a disc drive (see col. 7, lines 45-59; col. 9, lines 18-24).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jorge L. Ortiz-Criado whose telephone number is (571) 272-7624. The examiner can normally be reached on Mon.-Thu.(8:30 am - 6:00 pm),Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea L. Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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ANDREA WELLINGTON
SUPERVISORY PATENT EXAMINER